DOCUMENT RESUME

ED 176 759 IR 007 713

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TITLE An In[illegible]er-American Network for the Transmission of Bibliographic Information: Plans and Progress.
PUB DATE Sep 77
NOTE 10p.; Paper prepared for the 1977 IFLA/UNESCO Pre-Session on Resource Sharing of Libraries in Developing Countries (Antwerp, Belgium, August 30-September 4, 1977); For related documents, see IR 007 707-722

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Cataloging; *Developing Nations; *Information Needs; *Information Networks; *Library Planning; Library Programs; Technological Advancement; *Technology Transfer
IDENTIFIERS *Latin America

ABSTRACT

This document summarizes the project of the Organization of American States (OAS) General Secretariat to coordinate its activities in the field of library and information services. In Latin America plans have been made based on cooperative activities and services whereby each library can have access to materials held in all libraries, as well as to cataloging information on new materials. Latin American libraries make use of bibliographic data banks in the United States to accomplish their plans; of special interest to the OAS is the availability of data on books in Spanish and Portuguese. To achieve "Universal Bibliographic Control" more attention must be given to standardizing and centralizing cataloging efforts in Latin America, and OAS technical cooperation is offered to member states in the form of experts experienced in creating and maintaining centralized cataloging services. The conclusion is a survey of the component parts of an Inter-American Network, and of the procedures necessary to achieve these goals. (Author/JEG)

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AN INTER-AMERICAN NETWORK FOR THE TRANSMISSION OF BIBLIOGRAPHIC INFORMATION: PLANS AND PROGRESS

by

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AN INTER-AMERICAN NETWORK FOR THE TRANSMISSION OF BIBLIOGRAPHIC INFORMATION: PLANS AND PROGRESS*

by August 1977

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1. An Integrated Project of Library and Information Development.

The Library and Archives Development Program of the Organization of American States was charged by the Inter-American Council for Education, Science, and Culture at its Eighth Ordinary Meeting in February 1977 with planning an integrated program for the 1978/79 biennium which would coordinate the activities of the OAS General Secretariat in the field of library and information services. This challenge presents an opportunity to develop methods of collaboration among different sectors of the Secretariat concerned with information transfer in their fields of interests which can only be achieved by applying new technology to strengthen the development of informational institutions, instruments, mechanisms and media.

At the present time, numerous sectors of the OAS are engaged in developmental projects in Latin America to improve the conditions for improved access to information as well as in the provision of library services to the staff of the General Secretariat and other users and bibliographic information for general consumption. The Columbus Memorial Library, which collects materials and gives traditional reference services, expects to be able to expand its services to Latin America through coordination with two libraries of an inter-American nature brought into the OAS family recently by mandates of its governing councils, one in Panama, and one in Uruguay, and by utilizing bibliographic data banks in the United States. It is also responsible for the cataloging and indexing of the official records and technical publications of the OAS, and for recording technical reports of technical assistance missions and multinational centers maintained by the OAS in Latin America.

Other library and bibliographic services are provided within the General Secretariat by the Inter-American Statistical Institute, a division of the area of Economic and Social affairs. A proposed information system in the field of urban development has been designed for automated control and as a model which might be applied in other fields. The Regional Program of Scientific and Technological Development maintains a program of technical assistance for developing information services for industry and conducts many training seminars to that end. One of the activities of the Regional Program of Cultural Development is the compilation and publication of the Inter-American Review of Bibliography.

The Library and Archives Development Program of the Department of Cultural Affairs presently plans and executes projects in the field of libraries and documentation, archives management and documents restoration, bibliography and the booktrade, mass communications as related to easy to read materials and popular libraries, and a multinational project in developing school and university library systems as well as in educational documentation, which forms part of the Regional Program of Educational Development.

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* Prepared for the IFLA/UNESCO Pre-Seminar in "Use of Machine Readable Data from External Sources in Large Research Libraries and Library Systems," Brussels, 1-3 September 1977. The work is based on a 1976 report on Information Technology applied by OAS to developing an inter-American network for transmitting bibliographic information, prepared for the 38 FID World Congress, Mexico, 27 Sept. - 1 Oct., 1976.

The principle thrust of the Library and Archives Development Program in recent years has been the development of library and archival systems, as opposed to activities which would be useful to all libraries or to individual libraries through institutional support. First steps have been taken to develop the infrastructure as well as the structure of library and information systems as a means of improving efficiency, cutting costs of document recording (cataloging, indexing, etc.), dealing with information problems created by languages used in the different Member States of the OAS (English, French, Spanish and Portuguese), assuring greater accuracy and quality of bibliographic data stored in data banks, and achieving compatibility of formats for storing data to permit merging of new Latin American information systems.

2. Information Technology and Library Networking

Modern technological advances in information technology have made it possible to resolve the age-old problems for libraries and other information users with respect to:1) the high-cost of original cataloging of books and indexing periodical articles in the individual library; 2) the production of "information mechanisms" required for maintaining services to users, such as union catalogs of library holdings in a given area; and 3) the compilation of national and specialized bibliographies and other bibliographical and informational tools.

To achieve compatibility in bibliographical formatting for the exchange of bibliographic information, the Library of Congress developed a computer format translating cataloging standards into computer terms, which resulted in the MARC Format (Machine-Readable Cataloging), and provides MARC tapes to libraries and library systems. It has aided other countries such as Canada in developing their national MARC formats, and collaborated in drafting an UNIMARC format for the international transmission of information.

2.1. MARC in Latin America and Spain.

A Spanish-language version of MARC for Latin America (MARCAL), together with a manual explaining its use, has been produced by a team from the University of Puerto Rico, with the collaboration of Mexico CONACYT, under an OAS contract. The MARCAL format has been used to produce the forthcoming issue of the Bibliografía mexicana of the National Library of Mexico, with the assistance of the Consejo Nacional de Ciencia y Tecnología (CONACYT). An IBERMARC format in MARC compatible form is used for the production in Spain of the Bibliografía española. A Portuguese version of MARC was developed in Brazil for use in the cooperative cataloging program of the Instituto Brasileiro de Informação Científica e Tecnológica (IBICT, formerly IBBD), and for compiling the national bibliography in the National Library in Rio de Janeiro.

2.2. Library Networking

Although generally unrealized in Latin America, the concept of "library networking" in the United States, aided by the increased application of computer and communications potentiality, has expanded into regional library networks, frequently cutting across state lines, especially for cooperative plans for centralized cataloging services and other informational purposes. It has resulted in creating regional union catalogs of library holdings with automated bibliographical data bases for consultation by members of the network.

In Latin America in recent times planning and educational authorities and many government officials have come to understand the need for creating library systems as a means of reducing costs and providing better service to users, based on co-operative and/or centralized activities and services whereby each library can have access to materials held in all libraries as well as to cataloging information on new materials acquired in the system.

The concept of national information systems with an infra-structure of well-organized and functioning national systems of libraries and documentation, and of compatibility in universal systems for transmitting information in science and technology, is gaining momentum. The purpose of the 14-month OAS study program in 1974/75 at the University of Denver library school was to prepare national teams for the development of national library and documentation systems needed for development.

Of all the library-based bibliographical exchange programs in the United States using computer technology, the one which has achieved the most success and which provides cataloging data for the largest number of libraries is the Ohio College Library Center (OCLC) in Columbus, Ohio. The MARC tapes comprise the largest single component of the OCLC data base for monographs. Of special interest to the OAS is the availability of data on books in Spanish and Portuguese in the OCLC data base and the practical means of increasing access to it as well as input to it from libraries in Latin America and the Caribbean, as well as for use by U.S. libraries. Increasing numbers of titles of Latin American and Caribbean origin are recorded in the OCLC data base as data from the Universities of Texas, Florida and Miami, especially, are added to the OCLC records through the regional networks of SOLINET for the Southeastern states and the new AMIGOS Bibliographical Council for Texas university libraries, and Southwestern United States.

3. Bibliographical Compilation, Centralized Cataloging and Library Networking in Latin America

Much of the bibliographical compilation has been in reality a byproduct of the cataloging process in one or more libraries, and based on cataloging copy. For no country can it be said that the bibliographical control of its publications is adequate. To achieve "Universal Bibliographic Control" more attention must be given to standardizing and centralizing cataloging efforts in Latin America. Potential users have suffered in Latin America for lack of co operative and/or centralized cataloging programs and indexing services. At present, a new book acquired by 765 different libraries in one or more countries, some in the same university, will be cataloged 765 different times, and in a myriad of different ways.

3.1. Standards

More recently librarians in Latin America in meetings on national bibliography centralized cataloging and its automation, and on the use of the MARCAL version in spanish speaking Latin America have concurred on the need for maximum application of internationally accepted standars and full compatibility of computer formats to achieve optimum effect in merging data from different systems. To achieve "Universal Bibliographic Control" they are agreed generally on the use of the Anglo-American Cataloging Rules in Spanish in its revised form, the International Standard Book Description (ISBD) the International Standard Book Number (ISBN) and similar standards as well as for the application whenever possible of the principles of Cataloging-in-Publication. UNISIST principles are generally accepted.

4. OAS Technical Assistance for Centralized Cataloging and Library Automation

4.1. - OAS Goals and Practices

"... emphasis will continue to be placed on the establishment and maintenance of national systems of libraries, archives and documentation centers," according to the OAS Program Memorandum for 1976/82, "with special attention to information mechanisms, centralized services and working instruments, automation of libraries and archives services..." Furthermore, "... it is expected that several national and regional centralized cataloging centers will be set up and in a position to utilize library data banks for cataloging books and the automated information systems..."

OAS technical cooperation is offered to Member States in the form of experts experienced in creating and maintaining centralized cataloging services; the purchase of "equipment" including costly bibliographical tools and extraordinary equipment for traditional manual as well as automated procedures; and as the point draws near for the automation of national and regional projects, both software and data bases such as the MARC tapes and similar tapes will be procured for materials cataloged especially by the Library of Congress, the Benson Latin American Collection of the University of Texas, and for the Bibliografía española of Spain.

In considering requests submitted by Member States, the OAS gives top priority to those national requests which will result in developing national library and documentation systems and the component parts of regional networks for cataloging purposes, keeping in mind the geographical, political and linguistic divisions of Latin America and the Caribbean, as well as the internal organization of libraries. The first step is to fortify institutional capacity for performing centralized services such as cataloging new titles acquired by libraries composing the network, and new publications issued in Latin America and the Caribbean.

4.2. Centralized Cataloging for Central American

The University of Costa Rica is the first institution to receive OAS technical assistance to expand its present cataloging service for the libraries of the three campuses of the university to other libraries in Costa Rica, to provide cataloging copy to libraries in Nicaragua and then to others in Central America. The Project Director of the "Centro Catalográfico Centroamericano", who is presently Sub-Director of Libraries of the University of Costa Rica, visited manually operated and automated cataloging and information centers in the United States and Puerto Rico in early 1976 to become familiar with procedures and equipment used. As a second step, the Director of Libraries of the Catholic University of Chile was contracted by the OAS to assist the UCR in planning a workshop in June 1976 with representatives from UCR, Panama and Nicaragua, other OAS resource people and a few observers to discuss procedures, equipment, etc. necessary for setting up national centers as well as the regional center and necessary links among them.

Technical assistance from the AMIGOS Bibliographic Council was contracted by the OAS for the Centro Catalográfico Centroamericano (CCC), in Costa Rica, beginning in May 1977, to advise on the procedures required for a centralized cataloging service and assist in preparing procedural manuals, as well as planning for eventual automation. A demonstration was given to librarians in the country and others inter-

ested in transmitting bibliographic information by an on-line hook-up with OCLC and the automated means of procuring cataloging information from that data base. The OAS project also includes the payment of local staff to provide the centralized cataloging services. In 1978 technical assistance will be given to Nicaragua and Panama to set up national centers to be coordinated with the regional center in Costa Rica.

4.3. Other Regions of Latin America

With AMIGOS and other agencies, the OAS is exploring the potential for the transfer of library technology and networking experience in the United States and Canada to Latin America and the Caribbean, together with the feasibility of connections from existing network centers so as to take advantage of the OCLC data base for cataloging purposes and to input bibliographic data generated in Latin America into the OCLC data base. The Inter-American University of Puerto Rico, which created centralized cataloging services for its 15 campuses some years ago, has asked for OAS technical assistance for a feasibility and cost study for a connection from Puerto Rico to OCLC for cataloging books for libraries in Puerto Rico and eventually for the entire Caribbean, including the bilingual implications for inter-American cataloging services. The OAS is seeking the collaboration of the U.S. Office of Education and its Division of Library Programs to carry out the study.

Discussions have been held with the director and member libraries of the AMIGOS Bibliograhic Group concerning possible participation in AMIGOS of Mexican libraries, especially through a national center yet to be created. Both the Universidad Nacional Autónoma de México (UNAM) and CONACYT have expressed interest in OAS assistance to create a national center with connections directly or indirectly with OCLC. Discussions have been held with University of Texas catalogers concerning their possible collaboration to monitor the automated translation of author and subject heading from English to Spanish for maximum benefit of OCLC data in Latin American libraries and from Spanish to English for data on new Latin American publications for records in English input from Latin America into the OCLC data base.

4.4. Cooperative Cataloging in Colombia and a National Data Base.

The Instituto Colombiano para el Fomento de la Educación Superior (ICFES) has submitted two projects to the OAS, the first to create a national cataloging service based on cooperative cataloging. Technical assistance to ICFES began in August 1977 with the visit to Bogotá of the Director and bilingual assistant to the AMIGOS Director under OAS contract, to give a week-long seminar on library automation, assist in developing procedures for the cooperative cataloging project, and assess the facilities and capabilities in Colombia to develop a national data base similar to that of OCLC for Colombia on the basis of shared cataloging principles and procedures. Catalogers responsible for the project and systems specialists of ICFES will visit the offices and operations of AMIGOS in Dallas, Texas, for in-service training and meetings during the month of October 1977 to analyze the report which AMIGOS will have prepared. They will then also visit OCLC, selected libraries in Chicago with automated library systems as well as the project at Northwestern University to identify items of a retrospective bibliography from and about Venezuela and enter them in the data base at Northwestern in a MARC-like format, they will observe the work being done at the National Library of Canada in developing the bilingual equivalency lists of subject and author headings in the computer, other library-based networks and automated systems in the U.S., and the shared cataloging and automation activities

of the Library of Congress, the National Library of Medicine and the National Agricultural Library. A "wrap-up session" will be held at OAS headquarters in Washington in November to which representatives of the National Library of Canada, the Library of Congress and the principal translator into Spanish of the MARC format are invited.

4.5. Subject headings and Equivalency Lists

The second request is to expand the "Rovira list of subject heading in Spanish" and to produce specialized thesauri compatible with the basic list in the fields of special interest to Colombia. Dra. Rovira, of the OAS, was loaned to Colombia in early 1975 to aid them in initiating this project, and returned in July 1977 with a Mexican expert in subject headings for a working session with Colombian librarians on principles to be followed in this project which, although at this stage a national project, is intended for inter-American use.

To complement this "equivalency list" of subject headings in Spanish and English, it will be necessary also to develop the equivalency potential in the two languages, at least for author headings. It is anticipated that the experience of the National Library of Canada in creating an automated authority file for author and subject headings, with the collaboration of OCLC, will result in software useful in the development of a similar potential for Spanish-speaking Latin America.

The MARC authority format of the Library of Congress would be used to create a bilingual listing. To complement the network planning for the Spanish and English-speaking countries already under way, and develop a comprehensive Hemisphere-wide network for the exchange of bibliographic information discussions have been held with Brazilian authorities concerning the participation of Brazilian librarians in the development of the subject and author equivalency lists so as to have either bilingual or multilingual lists including Portuguese.

4.6. Collaboration with other OAS programs

Complementary to the planning for the regional network for Central America based at the University of Costa Rica is the Central American network for the exchange of information on agricultural research within the "Programa de Información Agropecuaria para el Istmo Centroamericano" of the Inter-American Institute of Agricultural Sciences, (IICA-PLADIC). Together with a Regional Data Bank, this is being developed among IICA and its Regional Office for Central American Programs, and ROCAP of the International Agency for Development of the U.S. (AID), as one of the activities of IICA's Centro Interamericano de Documentación e Información Agrícola (IICA-CIDIA), located at Turrialba, Costa Rica. IICA has developed in collaboration with FAO the Inter-American component of FAO's international AGRIS system, called AGRINTER.

Of additional interest to the OAS in the development of its "master-plan" for communicating bibliographic information on a Hemisphere-wide basis is the new develompnet by OCLC of a mechanism to link OCLC's on-line computer system with other on-line systems containing information in such fields as law, medicine, chemistry, and biology, with a grant from the Kellogg Foundation. The utilization of compatible programs already developed by nonprofit institutions will lessen the "software" cost in Latin America and will lead to easier merging of information from different sources as well as the standardization of procedures.

4.7. Use of other automated information systems

Early on it will become necessary to determine the means of complementing this proposed system for transmitting bibliographic information with a system to utilize automated information systems now available in the U. S. and other countries in a systematic manner to make them easily accessible to Latin American users. In accordance with UNISIST principles, furthermore, assistance must be given to develop specialized computer-based information systems in Latin America and to advance the creation of national information systems with the support of UNESCO, OAS, AID, the International Development Research Centre of Canada, foundations and other agencies.

5. Proposed Consortium of International Organizations and a Latin American Data Bank

While technical assistance is being given by the OAS to develop the library-bibliographic component of an inter-American network in Latin America, planning is going forward for the creation of a Washington, D. C., based consortium of libraries of international organizations with on-line access to OCLC, as a subsystem of the inter-American network. The consortium or network is planned to include initially the OAS, the Inter-American Development Bank, the Joint Bank-Fund Library, AID, and the Pan American Health Organization. These agencies would not only utilize the OCLC data bank for the cataloging of new materials, but would input into OCLC data on unpublished technical reports of technical assistance missions which they have sponsored and technical reports by their own staff members. Together with their contributions on new publications from Latin America sent to OCLC we have the beginnings of a data bank from and on Latin America. Tapes from OCLC for items contributed by the members of the consortium as well as those from AMIDOS can be merged with those produced in Costa Rica and Colombia in a yet-to-be-identified data bank for future expansion.

6. The Telecommunications Factor

Under study at the present time is the telecommunications factor. Communication with OCLC seems at present to work best with on-line access through a "dedicated line" telephone connection with OCLC (for 24-hour use) and the OCLC" 100 terminal. However, the telecommunications costs are high in Latin America whether the means of transmission is by cable, radio, microwave, or satellite. Time-sharing systems are not widely available as yet. It is hoped that the feasibility study proposed for Puerto Rico and the project in Central America will bring out more data and facts than are presently known about the transmission of bibliographic information in digital form through telephone, through satellite transmission and ground stations from computer to computer, and other possible applications of existing and new facilities and technologies.

7. The Component Parts of an Inter-American Network

With the collaboration of national agencies in Canada and the United States, and with the OAS and its Member States, it is anticipated that an Inter-American Network will be a truly hemispheric system with the collaboration and linking of national and regional centers in Latin America and the Caribbean, with those in the United States and Canada. It is conceived as being composed principally of the following elements: a) regional centers for Central America, based at the University of Costa Rica, for the Caribbean based possibly in Puerto Rico, and for the Andean Pact countries centered in Colombia; b) national center as component parts of a regional network, beginning in Nicaragua, Panama and Guatemala; c) national centers connected directly with exterior centers for Argentina, Brazil and Mexico; d) pilot cataloging centers as for university libraries in Peru; e) connections with OCLC either directly or indirectly through SOLINET in the Southeast, through the Univer-

sity of Texas and/or the AMIGOS Bibliographical Council in the Southwest, for the automatic transmission of cataloging data to and from OCLC; f) provision of cataloging tools to facilitate the automatic translation of cataloging data from English to Spanish and vice versa, including the equivalency lists in the form of an authority file in the two languages in the computer for author and subject headings; g) continued support of the OAS to keep up-to-date the MARC/AL format for books and serials and to utilize it for library automation together with formats in Spanish for other library materials for inclusion in automated as well as manually produced data bases; h), creation by the OAS of two inter-American centers for experimentation, training and the publication of technical manuals, one at the University of Costa Rica to expand the regional cataloging center into an inter-American center for library standards, and one at CONACYT in Mexico for library automation,; i) a data bank on Latin America including publications from Latin America, and technical reports on the area; and j) the Washington, D. C. subsystem for Latin American publications and technical reports.

To achieve these goals it will be necessary to: a) achieve agreement nationally and regionally on uniform cataloging standards and procedures, starting with a Spanish translation of the revised Anglo-American Cataloging Rules (a Spanish translation of the first edition of the AACR was published by the OAS) and other universally accepted standards; b) develop procedures for interaction between national centers and their cooperating institutions (or member libraries of the national system); c) provide original cataloging information on new publications by national authors for national and regional purposes; d) supply to member libraries cataloging copy for works by other than national authors (as well as by national authors), whenever possible from printed or computer-based bibliographic data bases; and e) develop the potential for supplying uniform information on retrospective titles of national or extranational origin; and f) obtain from the Library of Congress new MARC formats for technical reports (and government publications if necessary) and for journal articles. For external cooperation in the proposed network, the national center would transmit to the regional center information on works by national authors.

It is envisioned that the regional center would store in its data base (be it in traditional card form or on magnetic tape) all items it catalogs for other libraries or procures for them from outside the region. As time and funds permit, other automated data bases would be added to those of the regional centers. The feasibility study proposed by the Inter-American University will help to determine the media of communication of data to be used. Many of the policies and procedures will perforce be worked out as the inter-American network evolves, on the basis of available funds as well as on the rate at which the technology itself develops.

August 25, 1977